Reservoirs of Resources: Bureau of Reclamation Salvage Archeology from 1975 to 1985 in Texas, Oklahoma, and New Mexico: The Palmetto Bend, Choke Canyon, McGee Creek, and Brantley Projects

by

Van Tries Button and Bobbie H. Ferguson<sup>1</sup>

## Introduction

From 1947 until 1988 the Bureau of Reclamation's Southwest Regional Office located in Amarillo, Texas, oversaw planning, constructing, and operating dams and reservoirs in the States of Texas, Oklahoma, and New Mexico.<sup>2</sup> During the first decade after the passage of the 1974 Moss-Bennett Act, the hey day of funding, four large dams were constructed in the region. The substantial cultural resources investigations at these were funded directly and managed from planning to completion by Reclamation archeologists. From today's vantage point, we wondered whether the results of that work had been or were being used. If not, why not? Or, put differently, had the expenditure of public monies been worthwhile? We set out to find the answer(s) to present at the Reclamation Symposium at the 1998 Society American Archaeology annual meeting. Ultimately, our objectives were to:

- # assess the research use that has been made of the data collected by these studies which were funded and directed by Reclamation;
- # suggest reasons why the materials are or are not being used;
- # provide a list of the reports resulting from the formal, substantive research contracts;
- # identify where the reports and the collections are available; and
- # call attention to the considerable research potential of the truly massive quantities of data which study of these reservoirs yielded.

After a brief description of the four projects and the resources located, we describe our approach and the results.

<sup>1</sup>Van Tries Button - Federal Energy Regulatory Commission, Washington, D.C. 20426 Bobbie H. Ferguson - Bureau of Reclamation, Denver Federal Center, Denver, CO 80225-0007

The views expressed in this article are the authors' and do not necessarily reflect the position of the Federal Energy Regulatory Commission or the Bureau of Reclamation.

 $<sup>^2</sup>$ The administrative boundaries of Bureau of Reclamation regions are formed by drainages rather than State borders. The old Southwest Region corresponded to the ancient boundaries of Texas and included all of Oklahoma and Texas, New Mexico east of the Continental Divide, and a bit of Kansas and of Colorado.

# The Projects

# Choke Canyon

The Nueces River (Choke Canyon) Project (**Figure 1**) encompasses 39,022 acres of the valley formed by the juncture of the Frio, Nueces and Atascosa Rivers of South Texas. The valley is defined by escarpments of geologically ancient tuff and sandstone and terrace remnants of gravelly, pre-Holocene alluvium. Valley floor landforms include the channel of the Frio River, relict channels (sloughs), drainages descending from the uplands, the floodplain, and the sloping transition to the rolling brush covered upland plain. Native American sites from the Paleoindian through historic contact periods are represented. The sites are predominantly indicative of open air activities and constitute scatters of fire cracked rock, debitage, mussel shell, and stone tools. The approximately 37 sites which include a substantive historic component represent the activities of European descended American and Mexican settlers. Historic sites include stone block rubble heaps, standing chimneys, structures, and debris scatters.

# Summary of Choke Canyon Investigations

	Intensively	Extensively
Total Sites	Tested	Studied
395	199	25

# Palmetto Bend

The 18,582 acre Palmetto Bend Project's (**Figure 2**) Lake Texana memorializes a 19th century town which it inundated near the confluence of the Lavaca and Navidad Rivers in gulf coastal Texas. Located on the coastal plain 20 miles from the modern coastline the prehistoric sites of the project area allowed an examination of seasonal inland occupation by coastal Archaic and early Late Prehistoric groups. Historic resources included the town, plantations, and a sugar evaporator complex.

# **Summary of Palmetto Bend Investigations**

	Total Sites	Tested	Extensively Studied
	Total Sites	resteu	Studicu
Historic	50	4	4
Prehistorio	e <u>44</u>	<u>10</u>	<u>12</u>
Grand Tot	als <b>94</b>	14	16

# **Brantley**

The Brantley Project (**Figure 3**) occupies 33,366 acres of the wide, flat valley of the Pecos River and of the grass, brush, and sand dune-covered plains which bracket it in southeastern New Mexico. Absent the water provided by large scale irrigation first developed by eastern capital and entrepreneurs at the turn of the century, it was a forbidding landscape to Anglos. It had been, however, selectively exploited by groups beginning in the Archaic through the proto- and historic period.

# **Summary of Brantley Investigations**

	<b>Total Sites</b>	<b>Tested (limited &amp; extensive)</b>
<b>Prehistoric sites</b>	162	47
<b>Historic sites</b>	29	8
<b>Both Historic &amp;</b>	11	5
<b>Prehistoric</b>		
<b>Grand Total</b>	202	60

## McGee Creek

Just above the confluence of McGee Creek and Muddy Boggy Creek, the McGee Creek Dam (Figure 4) inundates approximately 6,800 acres within the total Project area of 30,948 acres in Southeastern Oklahoma's Ouachita Mountains. The steep rock and boulder strewn entrenched stream valleys, covered with pine and oak forests, have assured those who wanted it, including the relocated historic Choctaw, almost complete isolation. Exploitation of the area's resources began in the Paleoindian period and continued through the Archaic and Caddoan to the recent past.

#### Summary of McGee Creek Investigations

	Total Sites 552		<b>Tested</b> 146	Extensively Studied 21	
Prehistoric	Historic	Modern	Prehistoric		
30	70	11	& Modern 33	& Historic 20	& Modern
Unknown - 3 *22 sites 1	ocated in	1975 may	not be in t	this total.	

The definition of more than twelve hundred sites at these four reservoirs emphasizes the logic underlying the original national Reservoir Salvage Act. The confluences of rivers which make for good dam locations also tend to be prime locations for human settlement and concordant concentration of historic and prehistoric sites, but not, as noted below, necessarily areas of prime archeological interest. The survey done for each reservoir represents a

comprehensive attempt to identify every single site susceptible to definition with current archeological survey methods.

Compliance surveys, driven by the National Historic Preservation Act's dictates, are commonplace, but they seldom cover huge contiguous parcels of land like these four projects. More often these address small areas, or are linear, which allows significant sites to be avoided. Reservoir surveys allow for substantive programs of problem oriented extensive excavation.

The methods employed at the survey and testing levels for these four projects were unabashedly descriptive in focus. Our experience with "trendy" mid-1970s survey methodology would best be described as appalling. We consciously developed a bias for logistically skilled archeologists who could efficiently and accurately map and define sites and produce reports on budget and on time.

Project investigations were not theory free nor even theory poor. Mitigative data recovery (excavation) placed more emphasis on theoretical and research oriented issues, recognizing the principle that investigations needed to be guided by focused research questions or run the risk of missing and failing to record seminal data. The competent and devoted scholars who did the work felt obligated to achieve some of the research potential the resources held. They also recognized that not pursuing some research avenues had unacceptable data loss risks. Nevertheless, a significant portion of each project's budget of time, money, talent, and energy was devoted to compiling and curating relatively raw descriptive data. No pretense was ever made that the full potential of the data would be realized with Reclamation funds. We consciously sacrificed synthesis in the interest of avoiding losing data by not field collecting it, writing it up and curating it adequately and responsibly. We wanted to assure future researchers a sample of the full range of data represented: Paleoindian through historic; small single component through complex multistrata; etc. It is our considered professional opinion that we were pretty successful at compiling a usable, comprehensive record of the full archeological record of more than 100,000 acres of land and more than 1,200 archeological sites.

# **Investigative Approach**

Neither of the authors is currently active in the research areas of the various projects. To develop some objective data on the presence of these projects in mainstream archeological research, we

- 1) checked the use of the reports produced in at least one designated repository;
- 2) checked on the use of the collections at their designated repositories;
- 3) talked with researchers in the culture areas and individuals at SHPOs and repositories who are in tune with work in the states about the use and value of the work; and

4) searched for citations of the volumes in the regional and some national literature.

The locations and results of the search for items 1) and 2) and a summary of the results of 3) and 4) are provided below. A list of the reports for each project is in Attachment A. The complete results of 4) are given in Attachment B along with additional citations provided to us by our knowledgeable sources.

We have not conducted research on citations of published works on remote areas for comparison; such a comparison would be useful.

### The literature

Our initial emphasis in searching the literature was on sources which report primarily on archeological (read prehistoric) material. In consideration of the major amount of historic work which was done for the projects, this approach was expanded to cover a small number of regional historic sources, even though our knowledgeable contacts held little hope for these.

We checked American Antiquity (1978 - 1998) by reviewing the annual volume indices, selecting articles whose author, or regional or topical focus might relate to one of our projects, and examining the references cited for those articles. We scanned references cited for each article in Plains Anthropologist between 1974 and 1997. To cover the regional literature, the indices to subject and authors of articles in the New Mexico Historical Review (1974-1992), the <u>Bulletin of the Texas Archeological Society</u> (1980-1997), the <u>Transactions</u> of the Regional Archeological Symposium for Southeastern New Mexico and Western Texas (1974 - 1997), and the Bulletin of the Oklahoma Archeological Society (1993 -1998) were checked and all the references of articles whose subject or location were appropriate were reviewed for citations of project reports. We discovered the Social Sciences Citations Index after some of these checks had been completed, but completed a search for all primary authors, except Fawcett and Wakefield, for 1975 and then for each year between 1977 and 1997. The <u>Index</u> allowed us to expand our archeological journal coverage, too, as sources not initially selected, such as the <u>Journal of Field Archaeology</u> are included. indebted to Douglas K. Boyd, Teddy Stickney, Susan Bearden, and Robert Brooks who aided us in searching the selected sources unavailable to us.

#### The contacts

Contacts with individuals to check the use of reports and collections and to understand the use of the material in the culture area were by telephone and electronic mail. The number of individuals contacted for each project: Brantley, 21; Choke Canyon, 5; McGee Creek, 16; and Palmetto Bend, 7. Details are available from the authors.

#### The Results

# 1) Use of Reports

Choke Canyon - The reports are housed at the Texas Archaeological Research Laboratory, Austin (TARL) and at the Center for Archaeological Research of the University of Texas at San Antonio (UTSA). Neither repository tracks their reports in a way which allows a count to be made of the number of times a volume was used/checked out. Staff advised that the volumes were regularly used, so much so that they are dog eared.

Palmetto Bend - The reports are also housed at TARL. Staff advised that the volumes were accessed occasionally, but less frequently than the Choke Canyon volumes.

Brantley - Staff at the Archeological Resources Management Section and Library of the New Mexico Museum of Indian Arts and Culture, in Santa Fe, the official depository, believe the Brantley volumes are regularly used, but have no formal system for keeping track.

McGee Creek - Staff kindly checked the cards in all of the McGee Creek volumes at the Oklahoma Archeological Survey in Norman, the official repository. There are fifteen signatures on them all told, McGuff (1980) is the most frequently checked out (6 times). The majority of these volumes are now also available at the Museum of the Great Plains in Lawton.

# 2) Collections use

Choke Canyon - The bulk of the artifacts, field notes, etc. are curated at the Center for Archeological Research, UTSA. Curatorial staff were not aware of anyone accessing the collections for independent research. The faunal material is referenced in several seminal publications (see Attachment B), but it is not clear if this involved analysis in addition to that done for the reports.

Palmetto Bend - The materials are curated at TARL. Staff had no knowledge of their being accessed.

Brantley - The Brantley collections created during the 1970s by Southern Methodist University were consolidated with those from the Katzes' investigations at the New Mexico Museum of Indian Arts and Culture three years ago. We were able to determine that the material has been accessed at least once since it reached New Mexico. In addition to examination of the material by the Katzes (related to the second phase of work at Brantley), while at SMU the faunal material was accessed at least twice. Staff who had worked at SMU thought that the ground stone was used for teaching purposes and that Brantley materials may have been used for some student term papers or theses. We could not confirm the existence of any student papers or theses based on the Brantley material.

McGee Creek - The prehistoric diagnostic and environmental collections from the McGee Creek project work completed by North Texas State University (now the University of North Texas) and all associated records were transferred recently to the Museum of the Great Plains in Lawton, where these will be available to researchers. The bulk material has not yet been curated there. While the material was at NTSU, the Paleoindian and Choctaw material was each used once. The collection made during survey and testing by Environmental Assessments in 1978 is believed to be at Stovall Museum in Norman; no records of use are available, but the probability of their being used is low. The location of the very small amount of material collected during the Cheek sample survey is not certain, but is either at Stovall or with the NTSU collection, again the probability of use is low.

# 3) Insights offered by knowledgeable professionals

Choke Canyon - The Choke Canyon work defines the local prehistoric cultural material and settlement sequences and is generally cited in any work done in the area. Choke Canyon data have provided information on the limits of bison distribution (and hunting) on the southern plains (an issue of national level interest). Substantive methodological contributions also resulted. With the notable exception of Highley's (1986) dissertation done as part of the contracted Choke Canyon series, no independent theses have employed the Choke Canyon material. The Campbells' background research on historically known tribes is highly regarded. The actual research undertaken with Choke Canyon historic material is also well regarded, but has not served as a springboard for additional historic research.

Palmetto Bend - The prehistoric material provides a well documented collection of archeological data that inform on climatic change and human reaction in a coastal inland setting. Evidence from these investigations supports an interpretation that barrier islands formed along the middle Texas coast about the time of Christ creating a brackish estuary system with greater biological productivity. The Palmetto Bend data suggest that under these changed conditions people could live year-round on this section of the coast for the first time and there was a consequent shift in settlement and adaptation. The infrequent citation of the prehistoric work and virtual absence of reference to the historic work partly reflects a perception that the area is "kind of unique" and that not much active research is being done locally. However, it was felt that the main reason that the research is infrequently cited is that very few copies of final reports were made or distributed.

Brantley - The project work provides a solid basis for the local culture historical sequence and the definitive works for the area (Sebastian and Larralde 1989, Katz and Katz 1994) are based on it. The work also defines the eastern boundary of the Jornada Mogollon area. The limits of historic/protohistoric Mescallero Apache occupation are also suggested by the documented absence of the expected appertaining material in the project area. The historic work describes a segment of the material record of a time and place of iconic status in our national history (West of the Pecos). The Seven Rivers cemetery report provides both a model for dealing with the sensitive and complex issues related to cemetery relocation and a fascinating perspective on a frontier "boot hill."

The Katzes' overview (1994) has been distributed to "at least" two hundred people by the New Mexico State Historic Preservation Office. It seems to be primarily being used as context for compliance surveys related to oil and gas development. The virtual absence of citation in the mainstream historic and archeological literature does not reflect low regard for the work. Comments made at the 1985 Jornada Conference in Tularosa, New Mexico, support the contention that the work is competently done and important to the definition of the Jornada Mogollon culture area. One researcher active in Eastern New Mexico notes that he knows the Katzes' work but does not use it because it does not pertain to the time period (very late Late Prehistoric) of the sites he is investigating. Several individuals felt that there is a general perception that Eastern New Mexico is an unglamourous area and those working in the area are eccentric.

McGee Creek - Project data provide a solid basis for regional interpretive studies of history and prehistory which are fact-based rather than intuitive. The quality of the data reflect the principles which guided the work: standard data collection formats were employed to characterize sites in original records; testing followed a consistent and systematic approach; and intensive excavation techniques maximized identification of occupational episodes and minimized obscuring taphonomic patterning. These factors allowed a rare comparative view of the character of human use in the project area over space and through time. More particularly, the Quince Site excavations provide a view of Paleoindian to Archaic transition. The settlement pattern data identify upland settlement removed from the large drainages where most previous archeological work has been focused. Project data were also used to examine the issue of viewing the local Fourche Maline as an indigenous or peripheral-to-themain development.

The study of the local historic logging industry was a unique endeavor using an archeological approach to look at the material correlates of an extractive industry through time and attempt to define associations with changes in technology, economic events and differences in the focal resource quality and distribution in the local environment. The result was an understanding of how such industries react to change in complex natural and cultural landscapes. Others involved with cultural resource management issues related to historic timber harvesting have found the McGee Creek study interesting and useful.

The infrequent citation of the McGee Creek reports partly reflects the fact that copies of them were not distributed. There was also a particularly long gap between the completion of the field work and the publication of the reports. It was also suggested that there are relatively few archeologists working in southeastern Oklahoma and western Arkansas and it seems that there may be a kind of "critical mass" to be achieved if an area is to gain attention for its contributions and potential.

## 4) Citations of Project Data in the Literature (reference Attachment B)

PUBLICATION	CHOKE CANYON	PALMETTO BEND	BRANTLEY	MCGEE
American Antiquity	3			
American Anthropologist	3*			
Plains Anthropologist	9			2
Jrnl. Of Field Archaeol.	1			
Bulletin of the Texas Archaeological Society	9	1		
Bulletin of the Oklahoma Anthropological Society				1
Oklahoma Archaeological Society Newsletter				2
SE Archaeological Conference Bulletin		1		
Books & Monographs	3	3	4	8
TOTAL	28	5	4	13
*3 volumes covered in one review.				

# Summary

Each project has made a major contribution to regional research by defining a local cultural historical sequence. Researchers who are active in the general areas know of the work and cite it in support of particular points of their own investigations. For instance, the large block excavation of a Dalton component at McGee Creek's Quince Site fills what would otherwise be a gap in the paleoindian/archaic transition and is of national significance. Similarly, McGee Creek and Brantley provide a basis for defining the boundary of Fourche Maline and Jornada Mogollon respectively. The Choke Canyon and Palmetto Bend material help define the limits of prehistoric bison exploitation on the continent.

The reports are regularly used to provide context for cultural resource management (CRM) studies done in the immediate area of the projects. We believe that those dog eared volumes at TARL and the "at least" 200 copies requested for Katz and Katz (1994) primarily indicate that there's more oil and gas development (and hence CRM work) around Choke Canyon and Brantley than there is around McGee Creek and Palmetto Bend.

The historians who wrote up project historical reports reference their own work in their own work from time to time. Nobody else does much. They thought this was too bad. We do too.

We were relieved to find that the results of the project work have proved generally useful and are viewed by knowledgeable individuals as being of high quality. Certainly the data is available that would allow substantive problem oriented research (dissertations, NSF grants and the like) to be done, but it does not seem to have happened. Why not?

## **Discussion and Recommendations**

A subtheme which ran through many of the comments for each project was that the area lacked "glitz." None of these areas ever formed the center of a great cultural florescence. None of these areas seem to hold data which particularly promise revolutionizing our understanding of history or prehistory. They are viewed, however, as complementing and refining our knowledge of other areas and sharpen our big picture view. One could say that there was nothing particularly glitzy about Pecos Pueblo. It got its glitz from Kidder's investigation of it. Still, that star quality that attracts grants and graduate students is partly a matter of place and the local flow and ebb of human cultures. Our four project areas don't seem to have it.

We would like to suggest that another reason for the underutilization of these data is a myth tenaciously held by our profession. We refer to the, from our perspective, myth, of the gray literature. From the academic perspective, the gray literature is a reality. We find that when we attempt to commiserate with academic non-CRM archeologists about underutilization of CRM data, they are apt to say, "Well, if it were available we'd use it." "It's not published." One is tempted to translate this discussion as, "I didn't personally receive a copy, so it doesn't exist - End of story." In the difference between these perceptions of reality lies the problem. In reality, the data are available and useable, *and* they are not published.

There is a fundamental disconnect between the university and cultural resource management worlds. The academic folks, particularly historians, seem to have little or no knowledge of or interest in the processes of CRM, including little or no knowledge of the existence of the State Historic Preservation Officer's designated repositories, the reports in them, or the research that generated them. Even historians hired to do CRM work seem to develop amnesia when they return to their regular pursuits. After 30 years, the CRM world continues to be a separate and foreign land.

We CRM practitioners have contributed to the myth of the gray literature by acting as if we believe that compliance mandated work is conducted as if it were pure research. If the data are collected in a thoughtfully conceived problem oriented way in accordance with sound field procedures, the results should be publishable, right? Maybe! Research conceived because it is thought to be likely to make major scientific contributions and research conducted in legal compliance often yield fundamentally different things. The former, if

successful, is published. The latter are always written up, but are seldom very publishable. CRM work is not undertaken primarily to accomplish valuable research results; it is undertaken to document the resources of an area of Federal impact. CRM reports share much with soil matrix and primary historic sources. The real jewels are set in tons of dross, much of which is generated by bureaucratic formats, often at the lowest common denominator, created to ensure at least an acceptable product in the public interest. This is of course particularly true of smaller projects, but the generally thin citations of at least three out of four of our major projects seem to indicate that even projects with large and substantive contributions are apt not to be used. Successful academic archeologists and historians seldom cite CRM reports not because the reports are unavailable gray literature, but rather we suggest, because the reports are perceived as horribly boring and are apt to pertain to an area in which the scholar has minimal research interest (no glitz).

For the most part, these are primary, archival sources and it is necessary to go to them. They are not necessarily in your local museum or university library, although they may very well be; many copies of some reports have been distributed. Archival research is time consuming and perhaps not familiar ground for many archeologists. The reports and data are universally available, unlike the data collected for "pure research" which is often missing or lost. Every department has its beloved old professor who goes to his reward leaving behind the file cabinets and shoe boxes of unsynthesized unpublished field notes, etc. Sometimes the successors conduct successful posthumous salvage. Often not.

We need to be encouraging students to use compendia of data like those of our four projects as sources for term papers and dissertations. The most obvious applications would be in furthering regional subsistence and settlement pattern studies. The material should also be used to experiment with new analytic and interpretive techniques. While the material may not be glitzy, students will find great stores of meticulously collected high quality data in these repositories..

The preceding discussion should not be construed as a view that individuals and agencies responsible for salvage archeology can not do a better job of publicizing the results of the work. We can and should more frequently synthesize project results in professional journals (eg. Perttula and McGuff 1985, Hester 1995) and report significant findings (eg. Ricklis 1992). Syntheses of major projects' contributions to particular problems and chronological periods (Perttula 1992) should be the norm, not the exception. Perhaps State Archeologists or State professional societies could publish the results of large scale work in their series. Using the National Technical Information Service did not work out very successfully. The Smithsonian Institution's Anthropoligical Archives accepts CRM reports, but filing them there does not seem to have become the custom.

The technology for making computer records of archeological data has been around for more than thirty years. The development of the National Archeological Database by the National Park Service, and progress on computerizing site records in Colorado, New Mexico, Texas, California, and other states no doubt, are positive trends. However, our progress has been appallingly slow in working out protocols to allow making hard data available

electronically. Is it perhaps not high time to establish a national institution where all CRM reports would be filed, indexed, selectively reviewed, scanned and made available over the internet?

In closing, we would suggest that the tenacious obscurity of even large scale and reputable CRM research may also reflect a lack of National values or priorities in addressing archeological problems. This would seem to parallel our individualistic American way of life and our archeologist culture. Glitz, stars, tradition, and influence determine research priorities more than the potential of a particular area to yield new or needed information of use in a real understanding of our continent through space and time. Perhaps time will make a difference. The development of water projects tends to assure growth, modern settlement. That change may be accompanied by greater interest and appreciation of the area, providing an impetus to study its past. But for the Federal involvement which supported the growth, the data to understand that past might have been lost.

# Acknowledgements

This paper benefited from thoughtful reviews by Paul McGuff, John Speth, William Lipe, and Paul and Susana Katz, as well as the comments of the symposium discussants Frank McManamon and Fred Wendorf. Errors of commission and omission are the authors' alone.

#### Abstract

The last four big dams planned and built by the Bureau of Reclamation's old Southwest Region occupy the conjunction of the end of the era of large scale public works initiated in the 1960s and the start of the era of large scale public funding for archeological and historic investigation initiated by 1974 federal legislation. Not before or since was there so much work and so much money to work with. For each project, Palmetto Bend (Lake Texana) on the Texas Gulf Coast, Choke Canyon in South Texas, McGee Creek in Southeast Oklahoma, and the Brantley Project on the Pecos River in New Mexico: tens of thousands of acres were surveyed; hundreds of sites were defined; mitigative data recovery was done at dozens of sites; and tons of artifacts were analyzed, catalogued, and curated. In the interest of furthering the use of these massive quantities of data in regional research, we provide comprehensive lists of substantive reports for each project. We also attempt to examine how the reports and curated artifacts have been employed for research purposes in the ensuing years and provide the results of our citations search.

#### TABLE A

#### REFERENCES FOR THE BRANTLEY PROJECT

Volumes available at the Museum of Indian Arts and Crafts, Library and Archeological Research Management System, Santa Fe, New Mexico, and at the National Archives and Records Administration, Denver, Colorado

Bachman, George O.

1983 Geomorphological report. <u>Statement of Work, Brantley Project Cultural Resources Investigations, Appendix 2. Bureau of Reclamation, Southwest Regional Office, Amarillo, Texas.</u>
Included Katz and Katz 1985.

Bousman, C. Britt\*

1974 Archeological reconnaissance of Brantley reservoir.

<u>Archaeological Research Program, Department of Anthropology, Southern Methodist University.</u>

Etchieson, G. Meeks

1983 Archeological survey of additional portions of the Brantley project area, Eddy County, New Mexico. <u>Bureau of Reclamation</u>, <u>Southwest Region</u>, <u>Amarillo</u>, <u>Texas</u>.

Ferguson, Bobbie H.

1993 "...and they laid them to rest in the little plot beside the Pecos," final report on the relocation of old Seven Rivers cemetery, Eddy County, New Mexico, (2 Volumes). Bureau of Reclamation, Denver.

Gallagher, Joseph G.

1976 Survey, testing and evaluation of the Archeological resources of the Brantley reservoir, 1975. <u>Archaeological Research Program, Department of Anthropology, Southern Methodist University</u>.

Gallagher, Joseph G., and Susan E. Bearden

1980 Evaluation of cultural resources at Brantley reservoir, Eddy county, New Mexico. <u>Archaeological Research Program Research Report 120</u>, <u>Department of Anthropology, Southern Methodist University</u>. Report submitted to the National Park Service, Southwest Region, Santa Fe.

Henderson, Mark S.

1976 An archaeological inventory of Brantley reservoir, New Mexico, models of regional culture history. <u>Southern Methodist</u>
<u>University Contributions in Anthropology No. 18,</u>
<u>Department of Anthropology, Institute for the Study of Earth and Man, Southern Methodist University.</u>

Hufstetler, Mark, and Lon Johnson

1993 Watering the land, the turbulent history of the Carlsbad irrigation district. <u>National Park Service</u>, <u>Rocky Mountain</u> <u>Region</u>, <u>Division of National Preservation Programs</u>, <u>Denver</u>.

Katz, Susana R., and Paul Katz

- 1985a The history of the Carlsbad basin, Southeastern New Mexico: technical report, archeological investigations in the Brantley project location. <u>Incarnate Word College, San Antonio</u>
- 1985b Pecos past: The prehistory and history of the Brantley project locality. <u>Incarnate Word College, San Antonio</u>.
- 1985c The prehistory of the Carlsbad basin, Southeastern New Mexico: technical report archeological investigations in the Brantley project location. <u>Incarnate Word College, San Antonio</u>.
- Katz, Susana R., and Paul Katz (editors)
- 1987 Advances in middle Pecos archaeology: proceedings of a symposium held at the 4th Jornada Mogollon conference, Tule, New Mexico, October 12, 1985. <u>Bureau of Reclamation, Pecos River Office, Carlsbad, New Mexico.</u>
- \* not available at ARMS
- not available at the NARA

#### REFERENCES FOR THE PALMETTO BEND PROJECT

Volumes available at the Texas Archaeological Research Laboratory in Austin and at the National Archives and Records Administration in Denver

Crosby, H. Anthony

1977 Architecture of Texana, 1831-1883, Jackson county, Texas.

Research report 57, Texas Archeological Society, The University of Texas at Austin.

Fawcett, William B. ^ ^

1979 Phase III prehistoric archeological research within Palmetto Bend reservoir, Jackson county, Texas. Research Report, Texas Archeological Survey, University of Texas at Austin.

Freeman, Martha D., and William B. Fawcett

1980 The antebellum period in the Stephen F. Austin colony: historical and archeological research in the Palmetto Bend reservoir area, Jackson county, Texas. Research Report 70, Texas Archeological Survey, The University of Texas at Austin.

Jackson, Marsha F.

1977 Texana: excavations at a nineteenth-century inland coastal town, Jackson county, Texas. Research Report 56, Texas Archeological Survey, University of Texas at Austin

Mallouf, Robert J., Daniel E. Fox, and Alton K. Briggs
1973 Assessment of the cultural resources of Palmetto Bend
reservoir, Jackson county, Texas. <u>Archeological Survey Report</u>
11, Texas Historical Survey Committee, Austin.

McGuff, Paul R.

1978a Palmetto Bend project archeological site 41JK163, Jackson County, Texas. <u>University of Texas at Austin.</u>

1978b Prehistoric archeological investigations at Palmetto Bend reservoir: phase I. Research Report 58, Texas
Archeological Survey, The University of Texas at Austin.

McGuff, Paul R., and William B. Fawcett

1978 Phase II: Palmetto Bend archeological investigations: reevaluative survey, testing, <u>Research Report 67, Texas</u> <u>Archeological Survey, University of Texas at Austin.</u>

Sjoberg, Alf+

1978 A final report on soil chemical analysis and grain size determination of archaeological site deposits in the Palmetto Bend reservoir area, Jackson County, Texas. <u>University of Texas at Austin</u>.

Texas Archeological Survey Research Staff

1982 Phase III: prehistoric archeological research within Palmetto Bend reservoir, Jackson county, Texas. <u>Palmetto Bend Reservoir Series</u>, Volume 6, The University of Texas at Austin.

Wakefield, W.H.

- 1968 Archaeological surveys of Palmetto Bend and Choke canyon reservoirs, Texas. <u>Survey Report 5, Texas Archeological Salvage Project, University of Texas at Austin</u>.
- \* Not available at NARA
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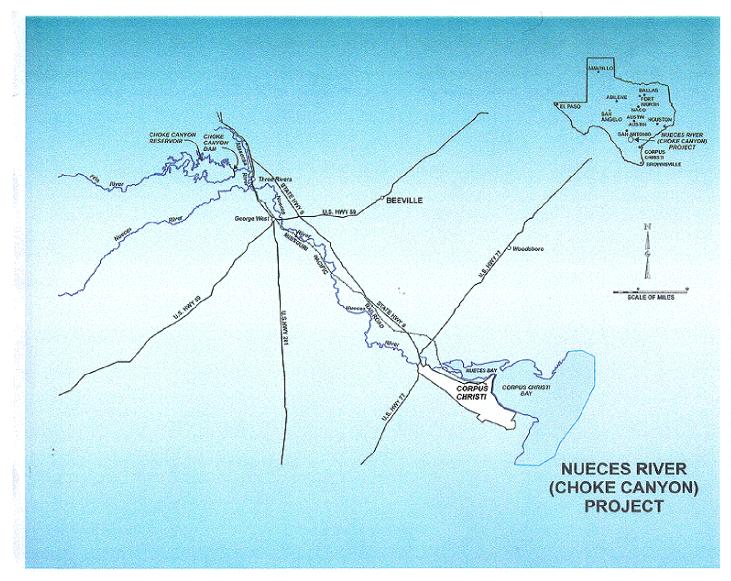


Figure 1

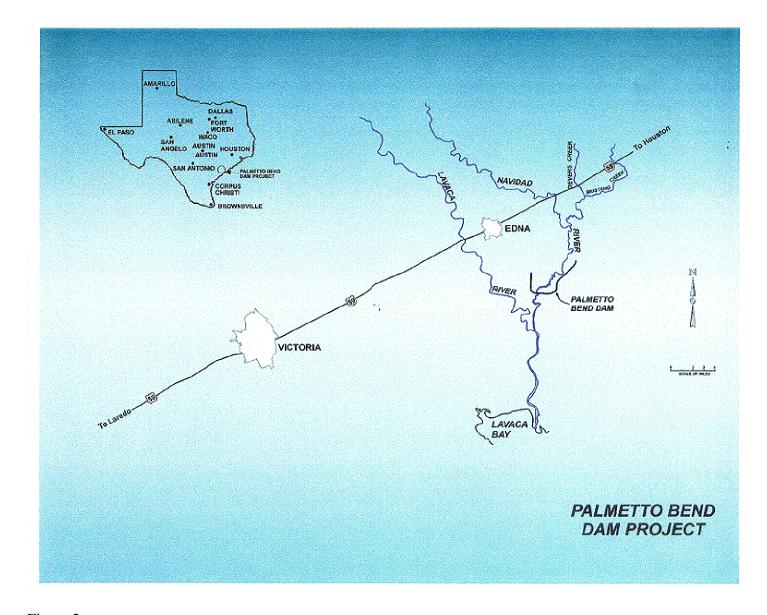


Figure 2

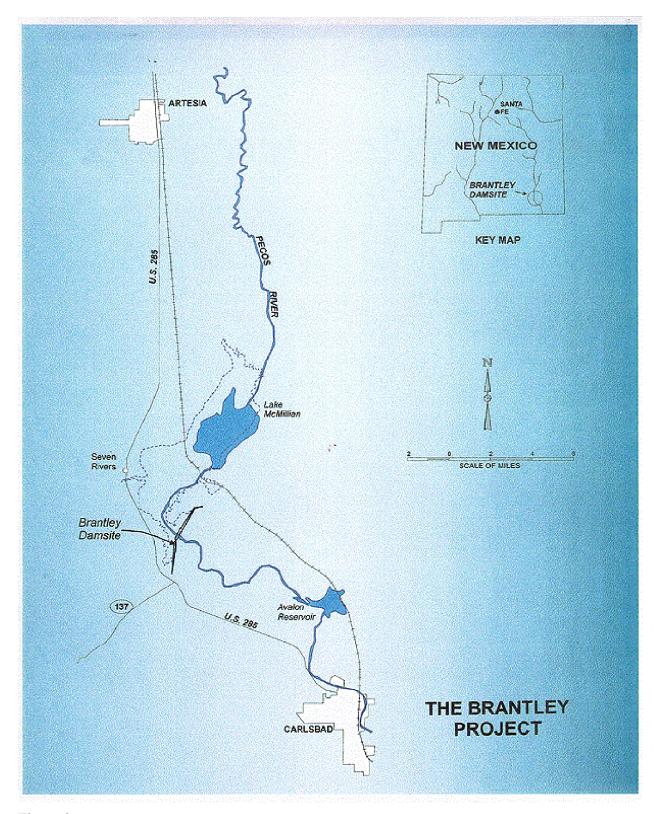
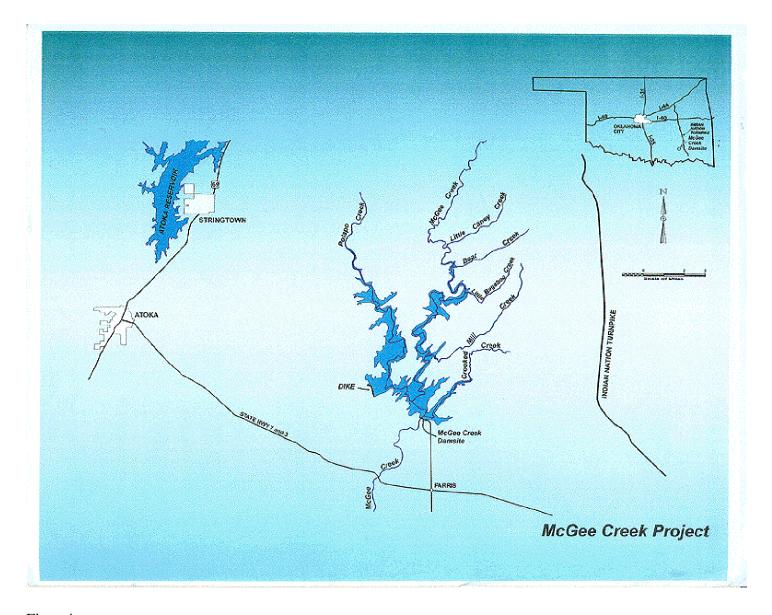


Figure 3



Figue 4